

Project Approval and Debt Financing Approval
Provide Chilled Water to the Hospital from the Campus Chilled Water System
MU

The University of Missouri-Columbia requests Project Approval and Debt Financing approval to provide chilled water to University Hospital, Critical Care Tower and University Physicians Medical Building from the campus chilled water system. The total project budget of \$23,000,000 is funded by \$20,000,000 million in Debt Financing and \$3,000,000 from Campus Facilities Utility Reserves for Capital Expansion.

In 2011, the Hospital hired Henneman Engineering Inc. to evaluate upgrading the existing Hospital chiller plant versus connecting to the MU chilled water system. The current plant is at the end of its useful service life and cannot meet the building loads. The study concluded that connection to the campus chilled water system would have a present value savings of \$13 million over 25 years and would also benefit the Hospital by freeing up the space required for the self-contained chiller plant and cooling towers.

Based upon the conclusions of the Henneman study, University Hospitals and Clinics (UHC) requested chilled water for their facilities to be supplied from the campus chilled water loop. Expansion of the East Campus Chiller Plant is needed to add 4,750 tons of chilled water capacity to the campus chilled water loop to serve UHC facilities. Also, changes to the chilled water piping systems in the University Hospital, Critical Care Tower, and University Physicians Medical Building are required. Since these two components of the project are in separate locations and have different scopes of work, the projects will be done separately.

East Campus Chilled Water Plant Addition

Burns and McDonnell, Inc., St. Louis, Missouri is the recommended Engineer/Architect for this phase of the project. The Burns and McDonnell team displayed the best understanding of the project and the best experience in designing chilled water plants for University campuses. Burns and McDonnell is teamed with Trabue, Hanson and Hinshaw, Inc., Columbia, Missouri (civil engineering), EDSI, Inc., Chesterfield, Missouri [MBE] (civil engineering), Ritter & Berkeley Consulting Engineers, Inc., Chesterfield, Missouri [WBE] (MEP engineering), KWAME Building Group, Inc., St. Louis, Missouri [MBE] (cost estimating), JDY Solutions, Inc., Overland Park, Kansas [MBE] (environmental consultant). The selection committee also interviewed Ross and Baruzzini, Inc. and Jacobs Engineering Group, Inc. both from St. Louis, Missouri.

The basic fee for the East Campus Chilled Water Plant Addition, \$1,120,000 (7% of the \$16,000,000 available for construction) was determined using the University's Fee Guidelines. The fee was stated in the Architectural Request for Qualifications.

An addition to the new East Campus Chilled Water Plant on the east side of campus will be constructed to provide 4750 tons of cooling capacity for the Hospital to connect to the campus chilled water loop.

December 6-7, 2012

Building Modifications in the University Hospital, Critical Care Tower, and University Physicians Medical Building

Ross & Baruzzini, Inc., St. Louis, Missouri is the recommended Engineer for this phase of the project. Ross & Baruzzini has successfully completed numerous chilled water projects on campus. Ross & Baruzzini is teamed with Stahl & Ponder Inc. [WBE] (electrical engineering). The selection committee also interviewed SSC Engineering, Inc. and McClure Engineering Associates, Inc. both of St. Louis, Missouri.

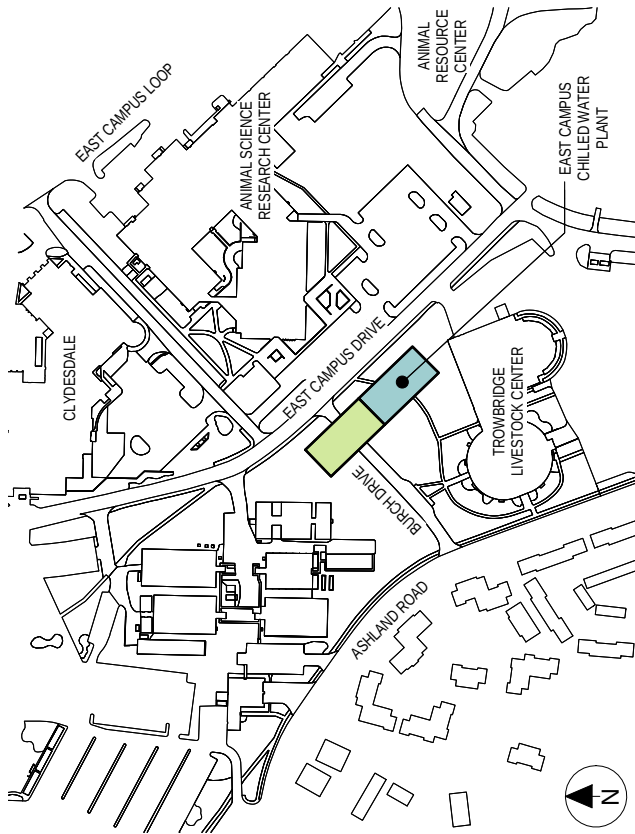
The basic fee for the Building Modifications, \$178,000 (10.4% of the \$1,720,000 available for construction) was determined using the University's Fee Guidelines. The fee was stated in the Request for Qualifications.

Modifications in University Hospital, Critical Care Tower and University Physicians Medical Building to connect to the chilled water loop includes the removal of several old chillers, installation of heat exchangers and pumps, changes to the piping in the existing building distribution system, and new piping connections to the loop piping entering the building.

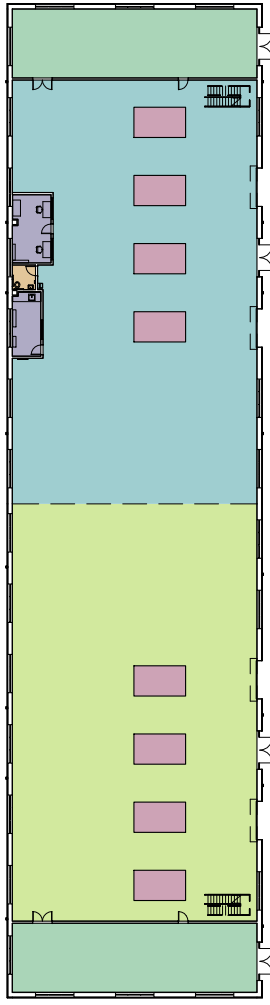
All construction will be phased over two winters and will be completed by April 2015.

The debt will be serviced by the chilled water recharge rate negotiated with UHC that includes capital recovery; as a result, no campus-wide chilled water rate increase for debt repayment will be needed.

A site plan, floor plan diagram, and exterior view of the building addition concept are attached.



SITE PLAN



GROUND FLOOR PLAN



EAST CAMPUS CHILLER PLANT

PHASES 1 AND 2



No. 1

Recommended Action - Project Approval and Debt Financing Approval to Provide Chilled Water to the Hospital from the Campus Chilled Water System, MU

It was recommended by Chancellor Deaton, endorsed by President Wolfe, recommended by the Finance Committee, moved by Curator _____ and seconded by Curator _____, that the following action be approved:

the project approval and debt financing approval to provide chilled water to University Hospital, Critical Care Tower and University Physicians Medical Building from the campus chilled water system, for the University of Missouri-Columbia.

Funding of the project budget is from:

Debt Financing	\$ 20,000,000
Campus Facilities Utility Reserves for Capital Expansion	<u>3,000,000</u>
Total Funding	\$ 23,000,000

Roll call vote Finance Committee	YES	NO
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Curator Downing

Curator Goode

Curator Steward

The motion _____.

Roll call vote Full Board:	YES	NO
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Curator Bradley

Curator Cupps

Curator Downing

Curator Erdman

Curator Goode

Curator Henrickson

Curator Steward

The motion _____

December 6-7, 2012